

UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF MICHIGAN
NORTHERN DIVISION

RONALD S. PAQUIN,

Plaintiff,

v.

Case No. 2:06-CV-252

CONTROL CHIEF CORPORATION,

HON. GORDON J. QUIST

Defendant.

OPINION

Plaintiff, Ronald S. Paquin (“Paquin”), filed his complaint on October 5, 2006, against Defendants SPH Crane & Hoist, Inc. d/b/a Morris Material Handling; Superior Crane and Machining Corporation; and Control Chief Corporation (“Control Chief”), alleging that as a result of Defendants’ negligence, he was injured on October 10, 2003, while operating an overhead crane during the course of his employment. All Defendants except for Control Chief have been dismissed. Control Chief has moved for summary judgment. For the following reasons, the Court will grant Control Chief’s motion for summary judgment and dismiss Paquin’s complaint.

BACKGROUND

Facts

On October 10, 2003, Paquin was working at the NewPage Corp. (formerly Mead Westvaco) paper mill in Wells, Michigan, where he had been employed for approximately twenty-two years. During his shift Paquin used an overhead crane to move an empty 15-ton steel mandrel to the north end of the building.¹ Paquin controlled the crane with a hand-held remote control box manufactured

¹Exhibit F to Control Chief’s summary judgment brief contains two pictures of a mandrel. A mandrel is a long cylindrical steel shaft or bar. Although the parties do not indicate how the mandrel is used, it appears that they hold rolls of paper.

by Control Chief. The remote control had separate levers to move a load in an east-west direction and a north-south direction. Each lever is attached to a Shallco switch that is designed to move in two directions about a center point. A spring in the switch tends to move the lever to the neutral position when not being used by the operator.

Paquin used the up-down lever on the remote control box to hoist the mandrel about twelve to eighteen inches off the ground. At that point, he was situated between the mandrel and the steel wall to his north, with the mandrel being parallel to the steel wall. After lifting the mandrel off the ground, Paquin released the up-down switch. Using the north-south trolley lever, he moved the mandrel a short distance to the north on the slowest setting. During this portion of the move Paquin was facing the mandrel and standing at about its middle. He then released the north-south lever. Due to the momentum from the movement, the load had about six to eight inches of swing when Paquin released the north-south lever. (Paquin Dep. at 186.) Paquin then began moving the load to the east using the east-west trolley lever at a faster speed. At that point Paquin turned his body so that he was facing east – the direction toward which he was moving the mandrel – rather than directly facing the mandrel, as he had been. In other words, he was walking parallel to the mandrel.

As Paquin moved the load east, he did not see it, and it struck him. (*Id.* at 199.) He did not realize that the load was approaching him until it actually hit him. (*Id.* at 198.) After the mandrel hit Paquin, it swung back and hit him a second time. When the mandrel hit Paquin the second time, he dropped to the floor to allow the mandrel to swing over him.

No one, other than Paquin, witnessed the accident. Paquin testified that he was only using the east-west lever at the time of the accident to move the load to the east and he released that lever only when the mandrel struck him. (*Id.* at 255-56.) Paquin believes that the mandrel improperly continued moving to the north. (*Id.* at 108.) However, he has no idea or suspicion about what

caused the accident. (*Id.* at 290.) Following the accident NewPage Corp.’s in-house technicians tested the crane and determined that it worked properly.

NewPage generally performs repairs and maintenance on Control Chief remote control boxes in-house in its Electrical and Instrumentation Department (“E & I”). (Ogren Dep. at 34.) Although E & I performs some repairs, such as reconnecting a wire or replacing a fuse, the majority of the work involves replacing old parts or components with new ones purchased from Control Chief. (Blau Dep. at 23-25.) On occasion, parts from an old or damaged remote control box may be removed and put into another remote control box. (Ogren Dep. at 20, 22; Blau Dep. at 12.)

The record is not entirely clear as to exactly when New Page purchased the remote control at issue, bearing serial number 58041, although the year of purchase was apparently 2000.² The maintenance log from E & I shows remote control box 58041 was checked and adjusted several times before the accident and that a “2007 switch” was changed. (Maintenance Log, Def.’s Br. Supp. Ex. H.)

The remote control box was placed in NewPage’s Safety Department during the weekend following the accident. (Willis Dep. at 9.) The next week it was transferred to E & I for an evaluation. The remote control box was opened twice by E & I personnel. Mark Blau, an E & I employee, took the screws out of the box and separated the two halves of the case. (Blau Dep. at 8.) Blau said that because of the extent of the damage to internal components of the box, no testing was performed. (*Id.*) Al Ogren, another E & I employee, recalled that he may have opened the box and confirmed that no testing was done. (Ogren Dep. at 10-11.) Bryon Branstrom, a NewPage

²Control Chief asserts in its brief that the paper mill purchased remote control box 58041 from Control Chief in 2000. In support of this assertion, it cites page 5 of Al Ogren’s deposition. However, nothing on that page of Ogren’s deposition mentions when the paper mill purchased the remote control box. Moreover, the maintenance records that Ogren produced indicated that E & I performed repairs on remote control box 58041 as far back as 1998. (Ogren Dep. at 23.) Although Ogren was unable to explain this discrepancy, the parties appear to agree that the paper mill in fact purchased the remote control box in 2000.

employee and union official, testified that he witnessed Ogren disassemble the box. (Branstrom Dep. at 28.) Branstrom said that Ogren gave a presentation in which he pulled the levers to show the union emergency response team that everything seemed to be working properly. (*Id.*)

At some point the battery and the microprocessor were removed from the box. Steve Edmonds, a safety manager at the paper mill, removed the battery, but neither he nor anyone else knows who removed the microprocessor. (Edmonds Dep. at 20-21.) After E & I examined the box, it was returned to the Safety Department, where it remained for several years. The box was kept in an unlocked storage room and then an unlocked office during the two years following the accident. Eventually, when the instant lawsuit was filed, Control Chief requested that the box be shipped to its office. At that point, Tom Willis, an employee in the Safety Department, removed the box from the unlocked storage room and locked it up until he was told to send it to Control Chief. (Willis Dep. at 13.)

Paquin's Expert

Paquin retained Russ Rasnic as an expert. Rasnic has a bachelor's degree in mechanical engineering and a master's degree in mechanical engineering with an emphasis in thermodynamics and e-transfer. Rasnic testified that during his career he has worked on electrical circuit design and electrical engineering, including work early in his career as a circuit designer for Texas Instruments and for ROL-LIFT. (Rasnic Dep. at 30.) While Rasnic has been qualified as an expert in mechanical engineering in many cases, he has never been qualified as an expert in electrical engineering. (*Id.* at 43.)

As part of his investigation, Rasnic purchased from Control Chief a new Shallco switch that Control Chief represented as being a replacement for the Shallco switch in the remote control box at issue. (*Id.* at 50-51.) Rasnic also was present at the Control Chief facility when the parties

examined the remote control box for the first time during the litigation. (*Id.* at 53.) Rasnic took pictures of the box and the Shallco switch and attempted to measure the engagement force of the switch, but he did not have the proper force gauge instrument with him. (*Id.* at 53-55.) Finally, he visited the paper mill, where he examined the crane and its components and took various measurements, including the size and swing of the mandrel. (*Id.* at 58-60.)

Rasnic considered and eliminated various possibilities that would explain why the mandrel might continue to travel in a northerly direction after Paquin released the north-south control, including someone else operating the other control box for the crane; mechanical interference; internal interference, such as a loose wire; and electrical problems with the crane. (*Id.* at 114-123.) He concluded that the most likely possibility is that the remote control box malfunctioned due to a contact weld. Rasnic explained that a contact weld is “established by an arc making the localized molten metal between [] two surfaces. . . . The arc causes the metal to pool and when it makes contact, it makes a connection. And then the arc’s gone and the metal resolidifies, and that’s how the weld occurs.” (*Id.* at 132-33.) Regarding the incident in question, Rasnic opined:

The most likely scenario is that the contact pads on the north/south rotary switch in the control box welded to the contact arm, which would keep the trolley moving in the north/south direction even after the switch was released.

At its lowest speed setting, there is minimal counteracting force from the spring on the order of 1.5 inches from the pivot that would serve to pull the contacts apart if they became welded. Contact welding is a well known phenomenon with DC current contactors, and there is forensic evidence that welding did occur on the first contact pad in the proper direction on the north south switch.

(*Id.* at 107-08.)

Although Rasnic admits that no weld was present on the contact pads, (*id.* at 143), he opines that there is evidence of a contact weld. He believes that the dark substances on the contact areas are burn marks from contact welding. (*Id.* at 137-38.) This conclusion is based solely on his experience, (*id.* at 138), as he did not conduct any chemical testing or metallurgical analysis of the

contact areas. (*Id.* at 148-49.) He also believes that what appears in photographs as metal missing from the contact pad is evidence of a contact weld. (*Id.* at 136-37.) Rasnic said that conditions that may cause contact welding include low battery voltage, pitting, dirt, and wear of the contact pads. (*Id.* at 127.) He said that low voltage was not a problem and he could not see any evidence of pitting or dirt, but he did observe some evidence of metal wear on the contact pads. (*Id.* at 128.)

Rasnic testified that the battery voltage – five volts – was the source of the energy for the arcing. (*Id.* at 130-31.) Rasnic testified that he does not know the amperage, but more importantly, he conceded that he does not know how much amperage is needed to make a contact weld or whether sufficient current was present to produce a weld :

Q I guess I need you to explain to me how a contact weld can occur in a situation where the voltage is less than five volts and the current is less than 100 microamps – with regard to the switch.

...

A I'm not commenting on the amount of voltage and the number of amps it takes to do a contact weld. I don't know how many amps it takes to make the contact weld. All I'm going on is the evidence that shows that there was welding there.

Q Is it scientifically possible to have a contact weld when there's less than five volts and the current through the contact set if [sic] less than 100 microamps?

A. I don't know.

(*Id.* at 140.)

Control Chief's Witnesses

Control Chief submits the testimony of David Higgs, its Vice President of Engineering. Higgs holds a degree equivalent to a bachelor's degree in electrical engineering. Higgs has been with Control Chief since 1984. (Higgs Dep. at 16.) Higgs testified that it is physically impossible for contact welding to occur in the switch. (*Id.* at 43.) He explained: "There's no way you can test [to determine whether contact welding occurred]. You don't have enough energy to cause a weld."

(*Id.* at 44.) Higgs said that several amps would be required to cause a contact weld, whereas the five volts that go through the switch generate less than 100 microamps, or 1/10,000th of an amp. (*Id.* at 41.) As support for his conclusion, Higgs cited a set of prints from an intrinsically safe transmitter, i.e., a transmitter designed to operate in a gaseous or explosive environment that will not create a spark or generate sufficient heat to ignite the gas. (*Id.* at 41-42.) Higgs explained that the schematic information for the intrinsically safe transmitter is identical in form and function to the transmitter at issue. (*Id.*) Finally, Higgs opined that the substance shown in the photograph of the switch was silver oxide from normal wear, not a burn caused by contract welding, as Rasnic contends. (*Id.* at 33.)

Control Chief has retained two experts, William D. Kimmel and John Lauhoff. Kimmel has a bachelor's degree in electrical engineering and is a Registered Professional Electrical Engineer, a Certified EMC Engineer, a Certified ESD Engineer, and a Member of the Institute of Electrical and Electronic Engineers. (Kimmel Aff. ¶ 2.) Kimmel opined that no contact welding occurred in the remote control box at issue because the amount of current is insufficient to create a weld. Kimmel states that contact welding becomes an issue where there is a substantial amount of current, for example, a small industrial motor drawing nearly ten amps. (*Id.* ¶ 9.) He confirms that the amount of current in the switch of the remote control box at issue is 1/100,000th of the current of a small industrial motor and that this is "nowhere near enough current . . . to produce even a small arc, much less contact welding." (*Id.* ¶ 10.) He further states that the patches of black on the contact pads are silver oxide, which is a normal phenomena in silver coated switches and is to be expected, and that Rasnic misinterpreted the silver oxide as evidence of a condition that occurs in larger electric motors but is nonexistent in low power electronic circuits. (*Id.* ¶¶ 6-7.) Finally, he says that a visual inspection of the contacts revealed no abnormality. (*Id.* ¶ 8.)

Lauhoff, a Professional Engineer and Certified Safety Professional, holds a bachelor's degree in industrial technology. He is also a member of the American Society of Safety Engineers. (Lauhoff Aff. ¶ 1.) Lauhoff, like Kimmel opines that a visual inspection of the switch shows no evidence of a contact weld – only discoloration and no uneven surfaces, which would be expected with a contact weld. (*Id.* ¶ 5.) Similarly, he confirms that it would be impossible for an arc flash to occur in the device at issue because there is insufficient voltage. “Arc flash can occur only if the voltage is in the range of 10-20 volts. If the maximum voltage is below this range, arcing will not occur. Since the maximum voltage of the switch was 5 volts, it was impossible for an arc flash to have occurred in the . . . device.” (*Id.* ¶ 6.)

MOTION STANDARD

Summary judgment is appropriate if there is no genuine issue as to any material fact and the moving party is entitled to a judgment as a matter of law. Fed. R. Civ. P. 56. Material facts are facts which are defined by substantive law and are necessary to apply the law. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S. Ct. 2505, 2510 (1986). A dispute is genuine if a reasonable jury could return judgment for the non-moving party. *Id.*

The court must draw all inferences in a light most favorable to the non-moving party, but may grant summary judgment when “the record taken as a whole could not lead a rational trier of fact to find for the non-moving party.” *Agristor Fin. Corp. v. Van Sickle*, 967 F.2d 233, 236 (6th Cir. 1992) (quoting *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 587, 106 S. Ct. 1348, 1356 (1986)).

DISCUSSION

Control Chief asserts that it is entitled to summary judgment because, regardless of whether Paquin is asserting a products liability claim under a negligence theory or a breach of implied

warranty claim, he cannot establish the necessary elements of: (1) a defect; (2) that existed when the remote control box left Control Chief's possession; and (3) that caused Paquin's injuries.

First, regarding a defect, Control Chief contends that Paquin cannot establish a defect because there is no physical proof that contact welding occurred. Control Chief points out that there is no uneven surface on the contact pads, which would be expected if a contact weld occurred. It also notes that the black patches cited by Rasnic as burn marks from a contact weld are actually silver oxide, a normal phenomena in silver coated switches. Control Chief also points out that Rasnic failed to do any scientific testing to support his conclusion, which was based solely on his visual inspection. Finally, Control Chief notes that it was impossible for a contact weld to occur because it is undisputed that there was not enough current in the switch to create contact welding.

Second, Control Chief contends that any defect is not attributable to it because Paquin can present no evidence that the remote control box was defective when it left Control Chief's control. Control Chief notes that the paper mill performed all of the maintenance and its logs show that the paper mill's E & I Department opened the remote control box for repairs several times and, thus, it is just as likely that any defect was caused by the paper mill. Moreover, Control Chief argues, the box was not properly preserved for purposes of litigation.

Finally, with regard to causation, Control Chief contends that there is no evidence upon which a reasonable jury could conclude that Paquin's injuries are attributable to Control Chief. It notes that in light of the evidence that contact welding was physically impossible, Paquin's theory of liability is based on nothing more than speculation and conjecture.

Paquin responds that under Michigan law, his testimony alone is sufficient to establish a defect. He further asserts that he need only show a logical sequence of events from which a jury could infer a defect, and Rasnic's testimony is sufficient to permit a jury to infer that a contact weld

occurred. Paquin further contends that Control Chief's motion merely presents a question of competing probabilities that is for the trier of fact to resolve. He asserts that this is a classic battle of the experts, and the Court should decline to usurp the jury's function by crediting Control Chief's experts over Rasnic.

Paquin also says that there is sufficient evidence to attribute the defect to Control Chief because there is no evidence that the paper mill made any repairs to the remote control box between the time it purchased the control box from Control Chief and the date of the accident that potentially could have caused the malfunction. He asserts that there is no evidence showing that any of the parts in the remote control box were required to be repaired, replaced, or maintained.

Finally, Paquin notes that Control Chief's argument on causation is based solely upon its assertion that the remote control box did not malfunction.

Michigan law recognizes three types of product defects: manufacturing defects, design defects, and failure to give adequate instructions or to warn. *See Sundberg v. Keller Ladder*, No. 00-10117-BC, 2001 WL 1397290, at (E.D. Mich. Nov. 8, 2001). A plaintiff may assert a products liability claim under either a negligence or a warranty theory. *MASB-SEG Property/Casualty Pool, Inc. v. Metalux*, 231 Mich. App. 393, 399, 586 N.W.2d 549, 552 (1998). A negligence theory generally focuses on the defendant's conduct, while an implied warranty theory generally focuses upon the fitness of the product regardless of the defendant's conduct. *See Prentis v. Yale Mfg. Co.*, 421 Mich. 670, 692, 365 N.W.2d 176, 186 (1984). To establish a prima facie case of negligence, a plaintiff must show that the defendant breached its duty and that the breach was the proximate cause of the plaintiff's injuries. *Richardson v. Mich. Humane Soc.*, 221 Mich. App. 526, 528, 561 N.W.2d 873, 874 (1997). To establish a breach of implied warranty, a plaintiff must show that the product was defective when it left the hands of the seller or lessor and that the defect caused the

plaintiff's injuries. *Jodway v. Kennametal, Inc.*, 207 Mich. App. 622, 629, 525 N.W.2d 883, 889 (1994). Under either theory, the plaintiff must “show that the defendant supplied a product that was defective and that the defect caused the injury.” *MASB-SEG Property/Casualty Pool*, 231 Mich. App. at 399, 586 N.W.2d at 552. A products liability plaintiff need not present evidence that excludes all other possible causes. *Mulholland v. DEC Int’l Corp.*, 432 Mich. 395, 415, 443 N.W.2d 340, 349 (1989). “It is enough that the plaintiff establishes a logical sequence of cause and effect, notwithstanding the existence of other plausible theories, although other plausible theories may also have evidentiary support.” *Id.*

The record in this case shows that Control Chief is entitled to summary judgment because Paquin has no idea what happened and his expert, Rasnic, a mechanical engineer, is unable to establish a defect in the remote control box. As noted above, Rasnic’s theory is that the crane continued to move the mandrel north, even after Paquin released the north-south lever on the control box, because a contact weld occurred that prevented the lever from returning to the neutral position and stopping the northward travel of the crane. Rasnic’s conclusion is based upon what he asserts is evidence of contact welding: dark substances he concludes are burn marks from contact welding and his opinion upon visual inspection that some of the metal is missing. The problem with this theory is that it is scientifically unsupportable. Even if Rasnic’s testimony, based solely upon his observations, is credited, his conclusion cannot stand in light of the testimony from Control Chief’s experts that there is simply not enough current in the switch to produce a contact weld. Contrary to Paquin’s argument, this is not a classic instance of a battle of the experts requiring submission of the issue to the trier of fact. Rather, in this case expert testimony, which is not in dispute, establishes that a condition essential the existence of the alleged defect did not exist. Rasnic acknowledged that he has no idea how much amperage would be needed to make a contact weld or

whether sufficient current was present. Moreover, he admitted that he did not know whether a contact weld could be produced with less than five volts and current of less than 100 microamps.

On the other hand, Higgs and Kimmel, who are electrical engineers, and Lauhoff, who is a safety engineer, all testified that it would take at least several amps of current to produce a weld and that the voltage in the remote control box and current in the switch was but a tiny fraction of the amount required. Paquin has failed to present any evidence to the contrary. Rasnic's conclusion that evidence of contact welding is present is thus nothing more than speculation, especially given the absence of any weld and the fact that the conditions he interprets as evidence of contact welding are consistent with the expected and normal presence of silver oxide.

Paquin relies substantially upon *Kenkel v. Stanley Works*, 256 Mich. App. 548, 665 N.W.2d 490 (2003), in support of his assertions that his testimony alone suffices to establish a defect and he need not prove the specific defect but is only required to show a logical sequence of cause and effect. His reliance on *Kenkel* is misplaced. In *Kenkel* the plaintiff became trapped in the sliding glass door at the entrance of a Rite Aid store. When the door opened, the plaintiff fell to the ground and landed on her back. The plaintiff sued the manufacturer, asserting both negligent design and manufacture and breach of implied warranty. The Michigan Court of Appeals held that the trial court correctly denied the defendant's motion for a directed verdict on the plaintiff's breach of implied warranty claim. The court said:

A product may not be reasonably fit for its intended or foreseeable use even if the product is "technically . . . not defective" *Bouverette, supra* at 399 (finding that a verdict in the defendant's favor on a negligence claim was not inconsistent with a verdict in the plaintiff's favor on a claim of breach of implied warranty). Moreover, a plaintiff pursuing a claim of breach of implied warranty is not required to identify the precise defect in the product unless there are multiple actors to whom a malfunction could be attributed. *Caldwell v Fox*, 394 Mich 401, 410; 231 NW2d 46 (1975); *Snider v. Bob Thibodeau Ford, Inc.*, 42 Mich App 708, 713; 202 NW2d 727 (1972); *Sundberg v Keller Ladder*, 189 F Supp 2d 671, 676 (ED Mich 2002) (decided pursuant to Michigan law). Furthermore, the plaintiff is not

required to demonstrate whether the defect was caused by “design, material, assembly, or a combination” *Holloway v Gen Motors Corp (On Rehearing)*, 403 Mich 614, 626, 271 NW2d 777 (1978). “It is the injury inflicted on the plaintiff that entitles him to a remedy, not his skill in discovering precisely where defendant’s manufacturing process went wrong.” *Id.*

Id. at 558-59, 665 N.W.2d at 497. The court further cited the principle that “[a] demonstrable malfunction is generally clear evidence of a defect” *Id.* at 558, 665 N.W. 2d at 497 (internal quotations and citation omitted). On this reasoning, the court concluded that the plaintiff’s testimony that the doors closed on her was sufficient to create an issue for the jury as to whether the doors malfunctioned due to a defect. *Id.*

In contrast to *Kenkel*, in the instant case, there is no evidence of a demonstrable malfunction and Paquin’s testimony alone is not sufficient to establish a defect. The plaintiff in *Kenkel* testified that the sliding door closed and trapped her, when it should have remained open. Because the door malfunctioned, the plaintiff was not required to prove a specific defect because the jury could permissibly infer that one existed. In this case, Paquin testified that he released the north-south trolley lever and it returned to the neutral position. (Paquin Dep. at 186.) He also said that once he released the lever, the mandrel stopped moving north, although it had a few inches of swing in it. (*Id.* at 109, 186.) Although Paquin believes that the crane improperly moved to the north after he released the lever, he has no idea what caused the movement. (*Id.* at 109, 290.) Nothing about Paquin’s testimony suggests that the remote control box malfunctioned. Other potential causes, such as a malfunction in the crane or operator error, were present. As the *Kenkel* court acknowledged, in a case such as Paquin’s, where there are multiple sources that could have cause the injury, the plaintiff is required to identify the precise defect. *Id.* at 557, 665 N.W.2d at 497. Thus, in *Crawford-Sachs v. Goodyear Tire & Rubber Co.*, No. 271052, 2007 WL 948688 (Mich. Ct. App. Mar. 29, 2007), the court held that the plaintiff could not rely on *Kenkel* to relieve her of her

obligation to prove a defect. *See id.* at *2. The plaintiff in that case alleged that the occurrence of a blow-out in her tire without an external cause was sufficient proof that the tire was defective. The court disagreed, noting that the blow-out could have been caused by the plaintiff's failure to maintain proper tire pressure. *Id.* Thus, the plaintiff failed to show a defect attributable to the manufacturer. This case is similar to *Crawford-Sachs* because there multiple possibilities as to why the mandrel hit Paquin.

Paquin's reliance on *Sundberg v. Keller Ladder*, 189 F. Supp. 2d 671 (E.D. Mich. 2002), is also misplaced. The plaintiff in *Sundberg* alleged that hooks on an aluminum extension ladder buckled and failed during normal use, causing injuries to the plaintiff. In contrast to this case, the product itself failed and there was no indication of a source other than the product that could have malfunctioned.

Rasnic's opinion that a contact weld occurred is based solely upon speculation and contrary to the undisputed evidence from Control Chief's witnesses that a contact weld could not have occurred in the Control Chief product. Because Paquin has failed to establish a defect, it necessarily follows that he has also failed to establish a defect attributable to Control Chief.

CONCLUSION

For the foregoing reasons, the Court will grant Control Chief's motion for summary judgment.

An Order consistent with this Opinion will be entered.

Dated: April 29, 2009

/s/ Gordon J. Quist
GORDON J. QUIST
UNITED STATES DISTRICT JUDGE